

Notice of Allowability

Application No.

09/975,475

Examiner

William T. Leader

Applicant(s)

MADOU ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the papers filed on October 20, 2003.
 2. ☒ The allowed claim(s) is/are 1-19.
 3. ☐ The drawings filed on _____ are accepted by the Examiner.
 4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
 6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____. |
| 3 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. <u>1/14, 7/30</u> | 7 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

DETAILED ACTION

1. Receipt of the response filed on 20 October 2003, is acknowledged. Applicant has canceled claims 20-24 directed to the Group II invention, reserving the right to pursue the Group II invention in a divisional application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the Title:

The title has been changed to --Method of Making Electrochemical Detectors based on Iridium Oxide--.

COMMENTS

The title has been amended to bring it into conformance with the recited subject matter. All of the allowed claims are directed to a method.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Robblee patent (4,717,581) is directed to iridium oxide coated electrodes for neural stimulation. The electrodes are made using a solution prepared by heating Ir(III) trichloride in HCl. The Sato patent (5,030,331) is directed to a process for preparing an iridium oxide film. Iridium and carbon are evaporated by electron beam or sputtering to prepare an iridium-carbon film, heating the film in an oxidizing atmosphere, and applying an alternating potential to the film to conduct electrolytic oxidation. The Lin et al patent (5,578,175) is directed to a process for manufacturing iridium and palladium oxides-coated titanium electrodes. A titanium substrate is subjected to cyclic voltametric coating.

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance: The prior art of record does not suggest a process in which iridium oxide which has been formed by exposing indium metal to an alkali metal carbonate at an oxidizing temperature is subjected to a voltage between the indium metal and the carbonate to drive the oxidizing indium toward a maximum oxidation state. The article "A Novel Iridium Oxide pH Electrode" published at pages 53-60 of the Electrochemical Society Proceedings, Volume 99-23 discloses the formation of iridium oxide by placing iridium wires in an alumina crucible, covering with lithium carbonate powder, and heating in an electric furnace in an air atmosphere. However, the article does not disclose or suggest applying a voltage between the indium metal and the carbonate. The Hitchman et al article "A Field-Induced Poising Technique for Promoting Convergence of Standard Electrode Potential Values of Thermally Oxidized Iridium pH Sensors" published at pages 137-144 of Talanta, Col.39, No. 2 discloses anodic oxidation of an iridium oxide electrode in sulfuric acid (pages 140, 141). Similarly, The Sato '331 patent discloses treatment of an iridium oxide film in aqueous sulfuric acid by scanning potential in the range of 1 to -0.2 V. Neither

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Hitchman et al or Sato suggest applying a voltage between iridium metal and a carbonate following formation of indium oxide on indium metal by exposing indium metal to an alkali metal carbonate at an oxidizing temperature as recited in the instant claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William T. Leader whose telephone number is 703-308-2530. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

W²
William Leader
December 12, 2003

ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700